

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please cancel claims 1-29, without prejudice or disclaimer, and add the following new claims:

30. (new): An aminopolycarboxylate-appended peptide for radioiodinating an antibody selected from the group consisting of:

(ABG)Gly-D-Tyr-D-Lys(ITC-Bz-DTPA)-OH,

(ABG-D-Ala-D-Tyr-D-Tyr-D-Lys)-APC, and

(ABG-D-Ala-D-Tyr-D-Tyr-D-Lys)₂-APC,

wherein ABG is an antibody binding group, APC is an aminopolycarboxylate, and DTPA is diethylenetriaminepentaacetic acid.

31. (new): The aminopolycarboxylate-appended peptide of claim 30, wherein the antibody binding group is 4-(N-maleimidomethyl)-cyclohexane-1-carbonyl or maleimidomethylcarbonyl.

32. (new): The aminopolycarboxylate-appended peptide of claim 30, wherein said aminopolycarboxylate is NTA (nitrilotriacetic acid), EDTA (ethylenediaminetetraacetic acid), DTPA (diethylenetriaminepentaacetic acid) or TTHA (triethylenetetraminehexaacetic acid).

33. (new): A method for preparing a stable antibody conjugate comprising said aminopolycarboxylate-appended peptide of claim 30, said method comprising:

(i) preparing said aminopolycarboxylate-appended peptide

- (ii) radiohalogenating said aminopolycarboxylate-appended peptide provided in (i) to provide a radiohalogenated aminopolycarboxylate-appended peptide; and
- (iii) conjugating said radiohalogenated aminopolycarboxylate-appended peptide to an antibody.

34. (new): The method of claim 33, wherein the number of amino acids in the peptide is 2-42.

35. (new): The method of claim 33, wherein said aminopolycarboxylate is directly bound to a D-lysine and the D-lysine is directly attached to a D-tyrosine.

36. (new): The method of claim 33, wherein said aminopolycarboxylate-appended peptide comprises:

- (a) a peptide that comprises at least one D-tyrosine or tyramine, an amino terminus, a carboxy terminus formed from a D-lysine and no contiguous L-amino acids between the D-tyrosine or tyramine and the carboxy terminus;
- (b) an aminopolycarboxylate conjugated via one of its carboxylic acid groups to said peptide via an ϵ -amino group of the D-lysine to form an aminopolycarboxylate-appended peptide; and
- (c) a linker group for covalently binding said aminopolycarboxylate-appended peptide to an antibody.

37. (new): The method of claim 35, wherein said linker group is capable of reacting with a sulfhydryl residue of an antibody to form a covalent bond.

38. (new): The method of claim 35, wherein said peptide contains 5-40 amino acids.

39. (new): The method of claim 35, wherein said tyramine or D-tyrosine is directly linked to said D-lysine.

40. (new): The method of claim 35, wherein said aminopolycarboxylate is bound to said peptide via an amide bond or thiourea.

41. (new): The method of claim 35, wherein said aminopolycarboxylate is EDTA (ethylenediaminetetraacetic acid), DTPA (diethylenetriaminepentaacetic acid) or TTHA (triethylenetetraminehexaacetic acid).

42. (new): A method for preparing a stable antibody conjugate comprising said aminopolycarboxylate-appended peptide of claim 30, said method comprising:

- (i) conjugating a tyramine to an aminopolycarboxylate;
- (ii) conjugating an antibody binding group to a backbone of said aminopolycarboxylate; and
- (iii) conjugating said aminopolycarboxylate to an antibody.

43. (new): The method of claim 41, wherein said aminopolycarboxylate is selected from EDTA (ethylenediaminetetraacetic acid), DTPA (diethylenetriaminepentaacetic acid) or TTHA (triethylenetetraminehexaacetic acid).

44. (new): The method of claim 41, wherein said aminopolycarboxylate is a bifunctional aminopolycarboxylate.

45. (new) A method for preparing a stable antibody conjugate comprising said aminopolycarboxylate-appended peptide of claim 30, comprising:

- (i) preparing a peptide comprising one or more D-tyrosine units and an antibody binding group;
- (ii) reductively coupling a reducing carbohydrate to the peptide to provide a carbohydrate-appended peptide;
- (iii) radiohalogenating said carbohydrate-appended peptide; and
- (iv) conjugating said radiohalogenated carbohydrate-appended peptide to an antibody.

46. (new): The method of claim 44, wherein said peptide comprises:

(a) a peptide that comprises at least one D-tyrosine, an amino terminus, a carboxy terminus formed from a D-lysine and no contiguous L-amino acids between the D-tyrosine and the carboxy terminus; and

(b) a linker group for covalently binding said carbohydrate-appended peptide to an antibody.

47. (new): The method of claim 44, wherein said carbohydrate is derived from melibiose.

48. (new): The method of claim 44, wherein said carbohydrate is derived from lactose.

49. (new): A method for preparing a stable antibody conjugate comprising said aminopolycarboxylate-appended peptide of claim 30, comprising:

(i) preparing a peptide comprising one or more D-tyrosine, and other D- or L-amino acids;

(ii) attaching a protein-binding cross linker to said peptide;

(iii) radiohalogenating said peptide; and

(iv) conjugating said radiohalogenated bifunctional peptide to antibodies.

50. (new): The method of claim 48, wherein the total number of amino acid units in said peptide is 2-40.

51. (new): The method of claim 48, wherein the amino acid attached to said protein-binding cross linker can be an L-amino acid.

52. (new): A method for preparing a stable antibody conjugate comprising said aminopolycarboxylate-appended peptide of claim 30, comprising:

(i) radiohalogenating and oxidizing a carbohydrate-tyramine or a carbohydrate-(D)-tyrosine adduct; and

(ii) coupling to an antibody.

53. (new): The method of claim 51, wherein said carbohydrate is melibiitoltyramine or dimelibiitoltyramine.

54. (new): The method of claim 52, wherein said carbohydrate is melibiitol-(D)-tyrosine.

55. (new): The method of claim 52, wherein said carbohydrate comprises an antibody-reactive moiety.

56. (new): The method of claim 54, wherein said antibody-reactive moiety is an aldehyde, an amine, an isothiocyanate, an N-hydroxysuccinimide ester, an imidate ester, a maleimide, a bromiodoacetamide or an iodoacetamide.

57. (new): The method of claim 51, further comprising reacting said radiohalogenated carbohydrate with a maleimide-appended cyanuric chloride and reacting with a thiol-introduced antibody.

58. (new): The method of claim 51, wherein said carbohydrate adduct is lactitoltyramine, dilactitoltyramine, melibiitoltyramine or dimelibiitoltyramine.